

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of )  
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Anna HEDÉN ) Group Art Unit: Unassigned  
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Application No.: Unassigned ) Examiner: Unassigned  
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Filed: January 15, 2002 )  
 )  
For: MECHANICAL TAPE FASTENING )  
 )  
SYSTEM FOR DISPOSABLE )  
 )  
ABSORBENT ARTICLES )  
 )  
 )

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination of the above-captioned application, please enter the following amendment.

**IN THE CLAIMS:**

Please amend claims 1-11 as follows:

1. (Amended) A disposable absorbent article, comprising :  
a first end portion and a second end portion, which portions are intended completely or partly to enclose a user's waist area during use of the article, and an intermediate crotch portion,

said portions comprising an inner layer, which inner layer is turned towards the user during use and which inner layer is liquid-permeable at least in a crotch portion opposite the user's genitals, a liquid-impermeable outer layer, and an absorbent body disposed between said outer and inner layers,

said article including in the area of the second end portion at least two mechanical tape fasteners, the mechanical tape fasteners adapted to be, upon application of the article, detachably interconnected with one or several fastening parts disposed on the outer layer of the first end portion and being complementary to said mechanical tape fasteners, wherein the two mechanical tape fasteners are oppositely arranged on the inner layer of the article at opposite side portions of said second end portion, the two mechanical tape fasteners each have one longitudinal and one transversal extension, said mechanical tape fasteners are each permanently joined to the inner layer of the article by means of a first bonding face arranged on a first end part of each of the tape fasteners, a second bonding face is arranged on an opposite second end part of each of the tape fasteners, prior to use of the article, the tape fasteners are arranged in a folded storage condition, each one of said tape fasteners being formed with an odd number of folds and the first and second bonding faces being turned towards the inner layer of the article, the second end parts of the two tape fasteners extend toward one another in said storage condition and in the storage condition of said article, each of the tape fasteners includes a first fold part that is joined to at least one other fold part by means of a bond, said bond being breakable in order to secure the second bonding face to the one or several fastening parts.

2. (Amended) An article as claimed in claim 1, wherein in their condition of storage, the tape fasteners are arranged in their entirety on the inner layer, with laterally outermost end edges of the tape fasteners being located interiorly of the lateral edges of said lateral portions.

3. (Amended) An article as claimed in claim 1, wherein in the condition of storage of the article, the mechanical tape fasteners comprise one fold only and in that the one fold forms the laterally outermost end edge of the tape fastener in said storage condition, the first fold part by means of said breakable bond is connected to the first end part and which covers the latter, and in that when the second bonding face is in said folded storage condition, the opposite second end part is located laterally interiorly of the first end part.

4. (Amended) An article as claimed in claim 3, wherein the second bonding face is in the form of hooks of a hook-and-loop fastener and the complementary fastening part forms the other half of the hook-and-loop fastener and is made from a material, in which the hooks are able to fasten, said material being formed with apertures, loops or fibre filaments for co-operation with the hooks.

5. (Amended) An article as claimed in claim 4, wherein the inner layer of the article comprises fibres to which the hooks of the second bonding face fasten to form a

weak bond relatively to the hook-and-loop fastener and said bond between the first fold part and the first end part.

6. (Amended) An article as claimed in claim 3, wherein the outermost end part of each of the mechanical tape fasteners is coated with a pressure-sensitive adhesive providing a weak adhesion force.

7. (Amended) An article as claimed in claim 1, wherein said breakable bond is designed to ensure that a force in the range of 0.2 to 2N is required to separate from one another joined-together tape-fastener strips having a width of 40mm.

8. (Amended) An article as claimed in claim 1, wherein the bond is in the form of a pattern of points or lines, and the bond is breakable without damage to the tape fastener.

9. (Amended) An article as claimed in claim 1, wherein the mechanical tape fasteners have a width of between 30 and 10 mm.

10. (Amended) An article as claimed in claim 1, wherein the mechanical tape fasteners comprise at least one elastic part disposed between the first end part and the second end part, said elastic part arranged to stretch upon occurrence of load during use of the article.

11. (Amended) An article as claimed in claim 1, wherein the mechanical tape fasteners do not stretch upon occurrence of load during use of the article.

Please add new claims 12 and 13 as follows:

--12. (New) An article as claimed in claim 1, wherein the article is a baby diaper or an incontinence diaper.

13. (New) An article as claimed in claim 1, wherein said breakable bond is designed to ensure that a force in the range of 0.5 to 1.5N is required to separate from one another joined-together tape-fastener strips having a width of 40mm.--

**REMARKS**

The foregoing amendments are made to place the claims in the preferred U.S.  
format and to remove multiple claim dependencies.

Respectfully submitted,

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**Attachment to Preliminary Amendment dated January 15, 2002**

**Marked-up Claims -**

1. (Amended) A disposable absorbent article[, such as a baby diaper, an incontinence diaper or the like], comprising :

a first end portion [(1)] and a second end portion [(2)], which portions are intended completely or partly to enclose [the] a user's waist area during use of the article, and an intermediate crotch portion [(3)],

said portions comprising an inner layer [(4)], which inner layer is turned towards the user during use and which inner layer is liquid-permeable at least in [the] a crotch portion opposite the user's genitals, a liquid-impermeable outer layer [(14)], and an absorbent body [(21)] disposed between said outer and inner layers,

said article including [being formed] in the area of the second end portion [(2) with] at least two mechanical tape fasteners [(25,26) intended], the mechanical tape fasteners adapted to be, upon application of the article, [to be] detachably interconnected with one or several fastening parts [(27)] disposed on the outer layer of the first end portion [(1)] and being complementary to said mechanical tape fasteners, [characterized in that the article comprises at least] wherein the two [of said] mechanical tape fasteners [(25,26), which] are oppositely arranged on the inner layer [(4)] of the article at opposite side portions [(23,24)] of said second end portion [(2)], [that] the two mechanical tape fasteners [(25,26)] each have one longitudinal and one transversal extension, [that] said mechanical tape fasteners are each permanently joined to the inner layer [(4)] of the article by means of a [producer's] first bonding face [(39)] arranged on a first end part [(28)] of each of the tape fasteners [(25,26)], [that] a [user's] second bonding face [(31)] is arranged on an [the] opposite second end part [(30)] of each of the tape fasteners, [the user's end part, that] prior to use of the article, the tape fasteners [(25,26)] are arranged in a folded storage

**Attachment to Preliminary Amendment dated January 15, 2002**

**Marked-up Claims -**

condition, each one of said tape fasteners being formed with an odd number of folds [(38)] and the first and second bonding faces [of both said producer's bonding face (39) and said user's bonding face (31)] being turned towards the inner layer [(4)] of the article, [that] the [user's] second end parts [(30)] of the two [opposite] tape fasteners [(25,26) face] extend toward one another in said storage condition and [that] in the storage condition of said article, each of the tape fasteners includes a first [individual] fold part that is [parts (28 and 29, respectively) are] joined to at least one [of the] other fold [parts (28 and 29, respectively)] part by means of a bond [(32), preferably in the form of thermal or ultrasonic welds], said bond being breakable in order to [establish the position of use of said tape fasteners] secure the second bonding face to the one or several fastening parts.

2. (Amended) An article as claimed in claim 1, [characterized in that] wherein in their condition of storage, the tape fasteners [(25,26)] are arranged in their entirety on the inner layer [(4)], with [the] laterally outermost end edges [(38)] of the tape fasteners being located interiorly of the lateral edges of said lateral portions [(23,24)].

3. (Amended) An article as claimed in claim 1 [or 2], [characterized in that] wherein in the condition of storage of the article, the mechanical tape fasteners [(25,26)] comprise one fold [(38)] only and in that the [latter] one fold forms the laterally outermost end edge of the tape fastener in said storage condition, [that] the [tape fasteners comprise a middle part (29), which] first fold part by means of said breakable bond [(32)] is connected to the first end part [(28)] and which covers the latter, and in that when the [user's] second



**Attachment to Preliminary Amendment dated January 15, 2002**

**Marked-up Claims -**

bonding face [(31)] is in said folded storage condition, the opposite second end part [(30)] is located laterally interiorly of the first end part [(28)].

4. (Amended) An article as claimed in claim 3, [characterized in that] wherein the [user's] second bonding face [(31)] is in the form of hooks of a hook-and-loop fastener and [in that] the complementary fastening part [(27)] forms the other half of the hook-and-loop fastener and is made from a material, in which the hooks are able to fasten, said material being formed with apertures, loops or fibre filaments for co-operation with the hooks.

5. (Amended) An article as claimed in claim 4, [characterized in that] wherein the inner layer [(4)] of the article comprises fibres [in] to which the hooks of the [user's] second bonding face [(31)] fasten to form a weak bond relatively to the hook-and-loop fastener and said bond between the [middle] first fold part and the first end part.

6. (Amended) An article as claimed in [any one of claims 3-5] claim 3, [characterized in that] wherein the outermost end part [(33)] of each of the mechanical tape fasteners [fastener (25)] is coated with a pressure-sensitive adhesive providing a weak adhesion force.

7. (Amended) An article as claimed in [any one of the preceding claims] claim 1, [characterized in that] wherein said breakable bond [(32)] is designed to ensure that a

**Attachment to Preliminary Amendment dated January 15, 2002**

**Marked-up Claims -**

force in the range of [0,2-2N, preferably in the range of 0.5-1.5N,] 0.2 to 2N is required to separate from one another joined-together tape-fastener strips having a width of 40mm.

8. (Amended) An article as claimed in [any one of the preceding claims] claim 1, [characterized in that] wherein the bond [(32)] is in the form of a pattern of points or lines, and [in that] the bond is breakable without damage to the tape fastener [(25)].

9. (Amended) An article as claimed in [any one of the preceding claims] claim 1, [characterized in that] wherein the mechanical tape fasteners [(25,26)] have a width of between 30 and 10 mm.

10. (Amended) An article as claimed in [any one of the preceding claims] claim 1, [characterized in that] wherein the mechanical tape fasteners comprise at least one elastic part [(29)] disposed between the [two end parts (28,30)] first end part and the second end part, said elastic part arranged to stretch upon occurrence of load during use of the article.

11. (Amended) An article as claimed in [any one of claims 1-9] claim 1, [characterized in that] wherein the mechanical tape fasteners [(25, 26)] do not stretch upon occurrence of load during use of the article.